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**Complete if Known**

Application Number	10/811,223
Filing Date	March 26, 2004
First Named Inventor	Lakkis
Group Art Unit	To Be Assigned
Examiner Name	To Be Assigned
Attorney Docket Number	45389.00008.CIP

## **U.S. PATENT DOCUMENTS**

## **FOREIGN PATENT DOCUMENTS**

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. <sup>3</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			

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/AE/	AB	ALAMOUTI, Siavash M., "A Simple Transmit Diversity Technique for Wireless Communications" <i>IEEE Journal on Select Areas in Communications</i> , Vol. 16, No. 8, October 1998.	
/AE/	AC	WORNELL, Gregory W. and Mitchell D. Trott, "Efficient Signal Processing Techniques for Exploiting Transmit Antenna Diversity on Fading Channels" <i>IEEE Transactions on Signal Processing</i> , Vol. 45, No. 1, January 1997.	

Examiner Signature	/Aslan Ettehadieh/	Date Considered	07/01/2007
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Group Art Unit	2681
Examiner Name	To Be Assigned

Attorney Docket Number 45389.00008.CIP1

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		Number	Kind Code <sup>2</sup> (if known)			
/AE/	AD	4,039,972		Scholten et al.	08-02-1997	
	AE	5,087,835		Hattangadi	02-11-1992	
	AF	5,396,110		Houston	03-07-1995	
	AG	5,563,909		Nakazawa	10-08-1996	
	AH	5,675,572		Hidejima et al.	10-07-1997	
	AI	5,949,813		Hunsinger et al.	10-07-1999	
	AJ	6,049,707		Buer et al.	04-11-2000	
	AK	6,192,068 B1		Fattouche et al.	02-20-2001	
	AL	6,198,327 B1		Takashi	03-06-2001	
	AM	6,320,897 B1		Fattouche et al.	11-20-2001	
↓	AN	2001/0017563		Kim	08-30-2001	
	AO	2001/0019282		Kuhne	09-06-2001	
		A1				
/AE/	AP	RE37,802 E		Fattouche et al.	07-23-2002	

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/AE/	AQ	BINGHAM, JOHN A.C. "Multicarrier Modulation for Data Transmission: An Idea Whose Time Has Come" IEEE Communications Magazine, May 1990, Pages 5-14.	
/AE/	AR	BLUM, RICK S. et al. "Improved Space – Time Coding for MIMO-OFDM Wireless Communications" IEEE Transactions on Communications, Vol. 49, No. 11, November 2001, pp. 1873-1878.	

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/AE/	AS	CHAUNG, JUSTIN et al. "Beyond 3G: Wideband Wireless Data Access Based on OFDM and Dynamic Packet Assignment" IEEE Communications Magazine, July 2000, pages 78-87.	
	AT	EDFORST, OVE et al. "An introduction to orthogonal frequency-division multiplexing" September 1996, pp. 1-50	
	AU	FOERSTER, JEFF et al. "Intel CFP Presentation for UWB PHY" IEEE P802.15 Working Group for Wireless Personal Area Networks, IEEE 802.15-03/109, March 03, 2003, pp. 1-53.	
	AV	KELLY, JOY "Multi-band OFDM Physical Layer Proposal Update" IEEE P802.15 Working Group for Wireless Personal Area Networks, IEEE 802.15-04/0122r4, March 15, 2004, pp. 1-26.	
	AW	LEEPER, DAVID G. "Wireless Data Blaster: Radio's oldest technology is providing a new way for portable electronics to transmit large quantities of data rapidly without wires" Scientific American, May 2002, Pages 64-69.	
	AX	OLSON, CHUCK "Examining and Modifying Marker Generator Output" Jackson Harbor Press, October 26, 1999, pp. 1-5.	
	AY	PATTAN, BRUNO "A Brief Exposure to Ultra-Wideband Signaling" Microwave Journal, December 2003, pages 1-5.	
	AZ	VANDANAMEELE, PATRICK et al. "A Combined OFDM/SDMS Approach" IEEE Journal on Selected Areas in Communications, November 2000, pp. 1-27.	
↓	BA	WONG, CHEONG YUI et al. "Multiuser OFDM with Adaptive Subcarrier, BIT, and Power Allocation" IEEE Journal on Selected Areas in Communications, Vol. 17, No. 10, October 1999, pp. 1747-1758.	
/AE/	BB	YE, ZHONG et al. "Throughput Analysis for a Packet Radio Network Using Rate Adaptive OFDM Signaling" IEEE International Conference on Communications, June 1999, pp. 1-7.	

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